

# Work Order ID 59390

Thursday, June 03, 2010 11:23:02 AM



Page 1

Item ID: D315-668-011

Accept



Setup Start



Revision ID:

Item Name: Skidtube LH

Stop



Start Date: 6/3/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 6/14/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

*H*

Date:

*10/6/03*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2904

Rev B

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPPD315-668-011

CHG 001

*8/10/07/06*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Page 2

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

110



Skidtubes

Skidtubes

Skidtubes

Memo

LANDING GEAR RESOURCE 1

1-Cut D2904b to length as per dwg D2904

2-Drill aft and fwd cap holes as per dwg D2904 using DT8025 jig  
(DO NOT OPEN TO FINISH SIZE)3-Drill saddle holes (6 Deg) as per Dwg D2904 using DT8938A jig  
(ENSURE THAT LOCATOR RING IS SET FOR LH TUBE)4-Drill GHW holes (3 Deg) as per Dwg D2904 using DT8938B jig  
(ENSURE THAT LOCATOR RING IS SET FOR LH TUBE)5-Insert and cleco doublers and DT8938d in position. Transfer all 256 holes thru  
tube and doublers.

6-Remove doublers and identify batch# and orientation

7-C'sink Rivet holes 256 places as per Dwg D2904 and deburr

8-Locate from saddle holes, drill wearplate holes using DT8994. Jig must be 1.7"  
from aft end of tube (REF)9-Remove fwd and aft indexing ridges as per dwg D2904. Open fwd and aft cap  
holes to finish size, scribe batch# at aft end of tube.

10-Remove marks left from drill jig and deburr

**POSITIVE RECALL**EFFECTIVE 10-06-07 AUTH URELEASED CP DATE 10-06-07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 3

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Cust Item ID:

Required Date: 6/14/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00							
130  HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00 0.00							
140  QC Quality Control	QC3- Inspect Part Finish  Memo	0.00 0.00							

8/10/06/07



11/10/6/9

DP

10-6-9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Date: 6/3/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 6/14/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150



Skidtubes

Skidtubes

Skidtubes

Memo

LANDING GEAR RESOURCE 1

1-Remove alodine around X-Bolt holes on doublers

2-Rivet doublers as per Dwg D2904.(DO NOT INSTALL RIVETS AROUND X-BOLT HOLES AT THIS TIME)

3-Open X-Bolt spacer holes to finish size as per dwg D2904.(DO NOT USE CUTTING FLUID)

4-C'sink and deburr X-Bolt spacer holes, prepare for Welding.

5-Blow all chips from inside tube

6-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting Pick:

Qty ☐ Part Number ☐ Description ☐ Batch  
A/R ☐ ☐ Sikaflex-291 ☐ 4113519 ☐  
Sikaflex expire date: 10/11/20 ☐ 4113519 ☐  
Start Time: 9:05am Date: 10/6/10  
Fin Time: \_\_\_\_\_ Date: \_\_\_\_\_

PTO

10/6/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

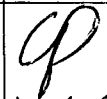

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
10.06.09	110	USE CR3212-403 RIVETS B/N <u>B114450</u> INSTEAD OF MS20601AD4W3 FSHEAR = 240 <sup>lb</sup> FOR MS20601 FSHEAR = 664 <sup>lb</sup> FOR CR3212	H	10/6/17		 10.06.09 (S) 042	 10/06/17	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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10.06.09	110							

NOTE: Date & initial all entries

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Page 5

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Start Date: 6/3/2010 Start Qty: 1.00

Required Date: 6/14/2010 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Skidtubes	0.00							
Skidtubes	Memo	0.00							
Skidtubes	LANDING GEAR RESOURCE 1								
	1-Weld crossbolt spacers D2909as per Dwg. D2904and QSI 004. For D2579 spacers, weld one side, pass Y" drill, weld other side, pass Y" drill A/R□□□ Aluminum Rod								
	2-Grind welds as per Dwg D2909								
	3-Install remaining rivets around X-Bolt spacer , use rivet shaver as necessary								
	4-Deburr,inspect tube for any visible scratches								
170	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									

BE 10/06/15

M 12/6/17

S 12/6/17

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 6

Item ID: D315-668-011

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Revision ID:

Item Name: Skidtube LH

Start Date: 6/3/2010 Start Qty: 1.00

Required Date: 6/14/2010 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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180 QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

190 Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

200 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

11:00  
320°  
11:30

1 lot 10-6-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Page 7

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Stop

Item Name: Skidtube LH

Start Date: 6/3/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 6/14/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210

QC3- Inspect Part Finish

0.00 =&gt; HJ 10/07/01



QC

Memo

0.00

Quality Control

1 d

220

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

HAND FINISHING RESOURCE #1

=&gt; HJ 10/07/01

1 d

1-Install inserts &amp; wearplates as per Dwg. D2904. Use a drop of Sikaflex on insert holes before installing wearplates

A/R ☐ ☐ ☐ Sikaflex-291 A113879 ☐ ☐ ☐

Sikaflex expire date: 10/11

3-Inspect for foreign object per QSI 024

4-Install 2646 Aft &amp; fwd Caps as per Dwg D2904 and seal with Sikaflex. Clean excess adhesive

A/R ☐ ☐ ☐ Sikaflex-291 A113879 ☐ ☐ ☐

Sikaflex expire date: 10/11

5-Wing Walk as per Dwg D2904 and QSI 005

4.4 Batch: 1114432

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 8

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

230

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

240

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

Packaging

250

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control



W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

Thursday, June 03, 2010 11:23:07 AM

Page 1

Work Order ID: 59390

Parent Item: D315-668-011

Parent Item Name: Skidtube LH

Comments: IPP Rev:A New Issue 07-04-12 JLM  
IPP Rev:B remove seq. 19 (handfinish wing walk) 08-04-30 DD verified by:EC

Start Date: 6/3/2010

Required Date: 6/14/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
D2904B		Manufactured	No			110	Each	9.0000	1	1			
Skidtube, 315													

Location

Loc Qty

Loc Code

LG

9

31826

1

36926

1

57330

7

DP 10-6-7

D2910

Manufactured

No

110

Each

26.0000

2

2

Doubler

Location

Loc Qty

Loc Code

ST030

26

36927

26

110

Each

35.0000

2

2

D2911

Manufactured

No

M 10/6/7

Doubler

Location

Loc Qty

Loc Code

ST030

35

36928

35

110

Each

1,501.000

54

54

MS27039-1-08

Purchased

No

M 10/6/7

Screw

Location

Loc Qty

Loc Code

ST291

1501

110552

44

110835

1257

114718

200

854 M 10/07/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 2 / 5

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Parent Item: D315-668-011



Parent Item Name: Skidtube LH

Start Date: 6/3/2010

Required Date: 6/14/2010

Comments: IPP Rev:A New Issue 07-04-12 JLM  
IPP Rev:B remove seq. 19 (handfinish wing walk) 08-04-30 DD verified  
by:EC

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
D2912		Manufactured	No			150	Each	22.0000	2	2			
Doubler													

Location						Loc Qty		Loc Code					
ST030						22							
36929						22							
MS20601-AD4W3	Purchased	No				150	Each	4,028.000	256	256			
Rivet													

CR 3212-4-03  
B # 114450

178  
258

Location						Loc Qty		Loc Code					
ST321						4000							
114538						4000							
ST322						28							
113899						28							
D2905	Manufactured	No				160	Each	2.0000	1	1			

Location						Loc Qty		Loc Code					
LG						2							
57333						2							

B 59393

D

M 10/6/10

Thursday, June 03, 2010 11:23:07 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Start Date: 6/3/2010

Required Date: 6/14/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
ALS4-1032-130		Purchased	No			220	Each	5,999.000	50	50			
<div><div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><di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x 50 M 10/07/01

x 54 M 10/07/01

x 2 M 10/07/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, June 03, 2010 11:23:07 AM

Page 4 / 5

Work Order ID: 59390

Parent Item: D315-668-011

Parent Item Name: Skidtube LH


Comments: IPP Rev:A New Issue 07-04-12 JLM  
IPP Rev:B remove seq. 19 (handfinish wing walk) 08-04-30 DD verified by:EC

Start Date: 6/3/2010

Required Date: 6/14/2010


Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
D2648-3		Manufactured	No			220	Each	13.0000	5	5			
													
Wearpad													


Location Loc Qty Loc Code

FG 12  
45316 12  
FP17 1  
52516 1

D2656-13		Manufactured	No			220	Each	24.0000	1	1			
													
Wearplate													

Location Loc Qty Loc Code

FP020 12  
57354 12  
FP20 12  
5454 12

D2656-33		Manufactured	No			220	Each	19.0000	1	1			
													
Wearplate													

Location Loc Qty Loc Code

MEZZ 19  
43806 6  
46167 13

X 5 10/07/01

X 1 10/07/01

X 1 10/07/01

Thursday, June 03, 2010 11:23:07 AM

Shop Packet Print

Page 4



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

• Thursday, June 03, 2010 11:23:07 AM

Page 5 / 5

\_\_\_\_\_



**Start Date:** 6/3/2010

**Required Date:** 6/14/2010

**Comments:** IPP Rev:A New Issue 07-04-12 JLM  
IPP Rev:B remove seq. 19 (handfinish wing walk) 08-04-30 DD verified  
by:EC

**Start Qty: 1.00**

**Required Qty: 1.00**

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
D2907		Manufactured	No			220	Each	29.0000	1	1			

**Abstract**

## Wearshoe

**Location**

FP

**Loc Qty**

29

**Loc Code**

D2909

Manufactured	No
--------------	----

220

Each

30.0000

11

11

**Abstract**

Spacer, Lama

**Location**

LG

**Loc Qty**

30

**Loc Code**

14091

30

Thursday, June 03, 2010 11:23:07 AM

## Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE USA, INC. BELLEVUE, WA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2904	Rev. B SHEET 1 OF 3
DATE 00.06.21		TITLE SA 315B SKIDTUBE ASSEMBLY SCALE NTS	
A	99.09.09	NEW ISSUE	
B	00.06.21	CHANGED ANGLES FOR HOLES	

PARTS LIST:

Qty -041	Qty -042	Part Number	Description
X		D2904-041	LH SKIDTUBE ASSEMBLY
	X	D2904-042	RH SKIDTUBE ASSEMBLY
2	2	D2646	CAP
4	4	D2648-3	WEARPAD
1	1	D2648-5	WEARPAD
1	1	D2656-13	WEARSHOE
1	1	D2656-33	WEARSHOE
1		D2904-1	SKIDTUBE
	1	D2904-2	SKIDTUBE
1	1	D2905	WEB
1	1	D2907	WEARSHOE
11	11	D2909	CROSS BOLT SPACER
2	2	D2910	SKIDTUBE DOUBLER
2	2	D2911	SKIDTUBE DOUBLER
2	2	D2912	SKIDTUBE DOUBLER
50	50	ALS7-1032-130 or AKS4-1032-130 or ALS4-1032-130 or ALS7-1032-130	INSERT
54	54	AN960JD10L	WASHER
256	256	MS20601AD4W3	RIVET
54	54	MS27039-1-08	SCREW

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WITHOUT NOTICE  
WORK ORDER  
NO. 52320

B-10-6-03

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00.07.01

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2904	Rev. B SHEET 2 OF 3
DATE 00.06.21		TITLE SA 315B SKIDTUBE ASSEMBLY	SCALE 1:20

#### GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. MAKE D2904-1 AND D2904-2 FROM D2914 EXTRUSION (INITIAL LENGTH = 142.0).
3. DAMAGE TOLERANCE ON BENDING:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. NO GOUGING IS ACCEPTABLE IN THE FLAT PORTION OF THE TUBE. GOUGES UP TO 0.020 ARE ACCEPTABLE IN THE BENT PORTION OF THE TUBE. TUBE O.D. SHOULD BE  $3.150 \pm 0.010$  IN THE FLAT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
4. ALL HOLES DRILLED ON CENTERLINES EXCEPT THOSE NOTED BY SECTION C-C.
5. DRILL #30 HOLES ( $\varnothing 0.128$  REF) TO LINE UP WITH  $\varnothing 0.128$  HOLES IN D2910/D2911/D2912 DOUBLERS. C'SINK  $\varnothing 0.239 \times 100^\circ$ .
6. BOND D2905 WEB INTO D2904-1 (OR D2904-2) OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
7. WELDING TO BE DONE PER DART QSI 004.
8. AFTER DRILLING, BENDING, AND INSTALLING WEB & DOUBLERS, PERFORM THE FOLLOWING FOR  $\varnothing 0.500$  HOLES ONLY:
  - CHAMFER HOLE  $0.050 \times 45^\circ$
  - INSERT D2909 SPACER (11 PLACES)
  - WELD INTO PLACE
  - GRIND FLUSH
  - DRILL OUT SPACER TO  $\varnothing 0.406$
9. FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
  - MINIMUM YIELD TENSILE STRENGTH = 35 ksi
  - MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
10. FINISH:
  - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2905 WEB AND D2910/D2911/D2912 DOUBLERS.
  - POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
  - BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
11. DRILL  $\varnothing 0.297$  FOR ALS7-1032-130 INSERT USING DT8395 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH.

W/0 59382

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00.09.01 *[Signature]*

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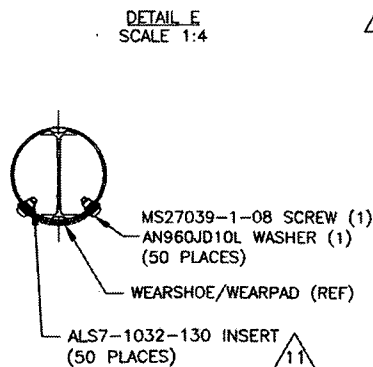
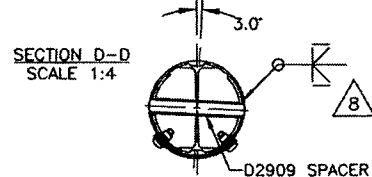
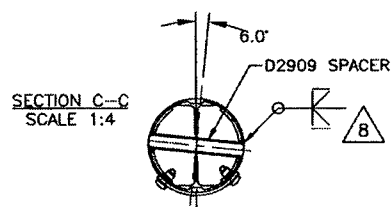
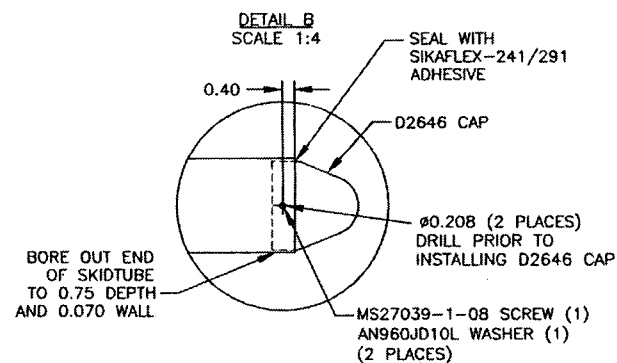
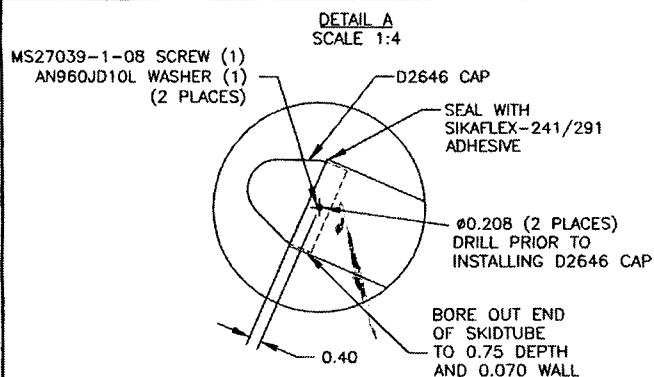
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

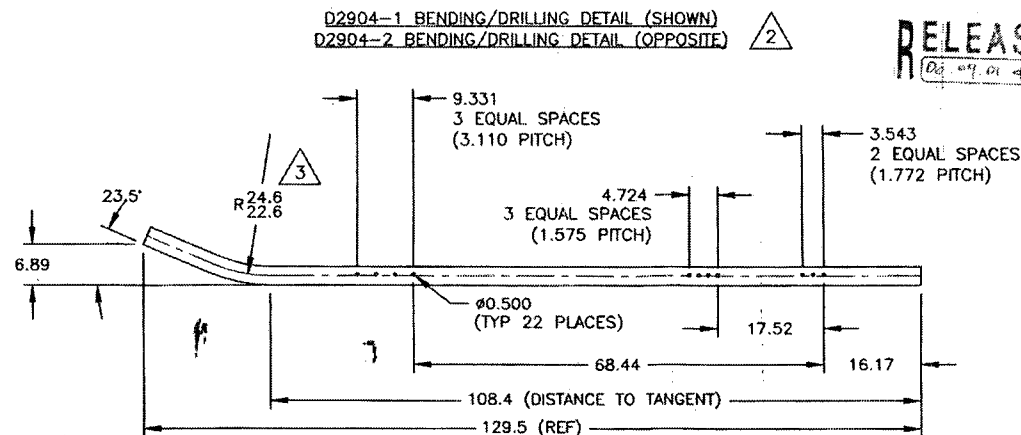
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

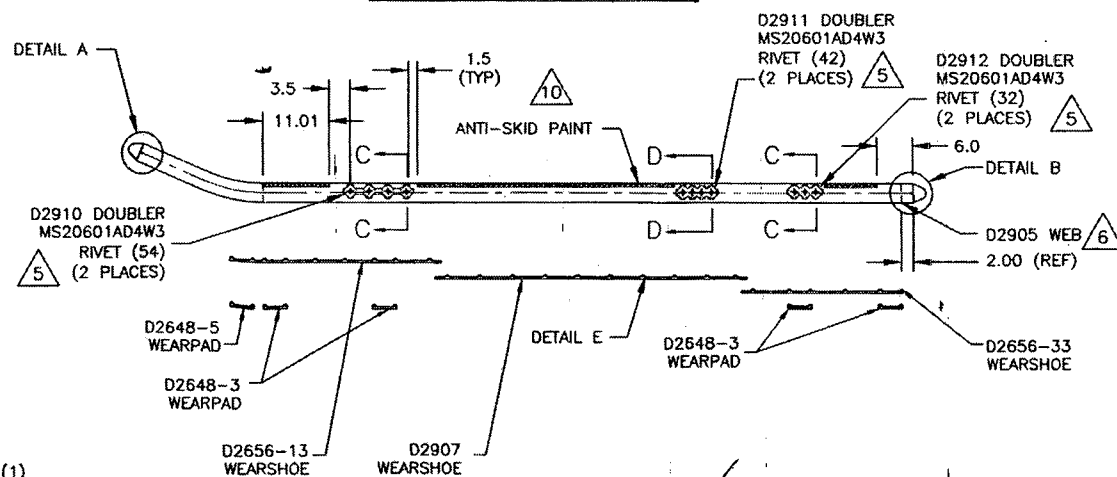
**NOTE:** Date & initial all entries



**D2904-1 BENDING/DRILLING DETAIL (SHOWN)**  
**D2904-2 BENDING/DRILLING DETAIL (OPPOSITE)**



**D2904-041 LH ASSEMBLY DETAIL (SHOWN)**  
**D2904-042 RH ASSEMBLY (OPPOSITE)**



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THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.		CHECKED #	APPROVED #	DRAWING NO. D2904	SHEET 3 OF 3
DATE 00.06.21		TITLE SA 315B SKIDTUBE ASSEMBLY		SCALE 1:20	

RELEASED

WLD 57388



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 231

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 573262  
Part number: B315 668 012  
Description: Lama tube  
Welding Process: Tig[☒] Mig[ ]  
Base materiel: Aluminium  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Pat. Dent. Date of Test Coupon 10.05.18

Welder Barclay Elliott Date of Test Coupon 10.05.18

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

# Work Order ID 59390

Thursday, June 03, 2010 11:23:02 AM



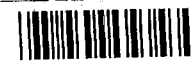
Page 1

Item ID: D315-668-011

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube LH

Start Date: 6/3/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 6/14/2010 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: 14

Date: 10-6-03

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2904

Rev B

0.00

100



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CZ 10/7/03

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